CELLAVISION

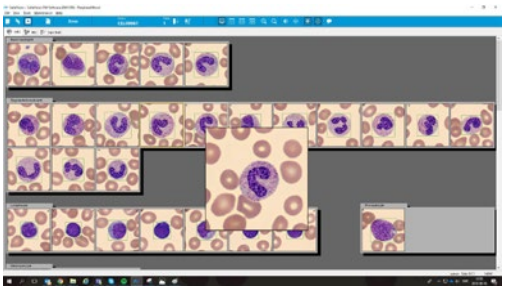
PRODUCT EVALUATION SUMMARY:

THE IMPLEMENTATION IMPACT OF CELLAVISION DC-1 IN A DISTRIBUTED LABORATORY NETWORK

INTRODUCTION:

The recent introduction of the CellaVision DC-1 Analyzer makes it possible for small labs to implement the same digital methodology for performing blood cell differentials that is commonly used by large laboratory organizations.

CellaVision DC-1, like all CellaVision Analyzers, employs a combination of high power microscopy, digital imaging and AI-based image analysis to identify the monolayer, locate individual cells, capture high-quality cell images and deliver a pre-classification of cells for convenient review on-screen by the Medical Technologist.



CellaVision recently teamed up with Calgary Lab Services (CLS), to conduct an in-situ product evaluation assessing the utility and impact of CellaVision DC-1 in a distributed laboratory network.

CLS is a leading medical diagnostic laboratory serving a large catchment of Southern Alberta, Canada. In an organization made up by more than 15 geographically dispersed laboratory sites, the high-throughput Calgary site serves as the central referral site for smaller labs, such as the chosen test site in the town of High River. At High River, workflow efficiency and the speed of service to clinicians were negatively impacted by the need to transport all challenging cases by road to the referral site in Calgary, resulting in unnecessarily prolonged turn-around times (TATs).

AIM:

The aim of the evaluation was to assess the utility and impact of CellaVision DC-1 when implemented in a distributed laboratory network, focusing on two important performance indicators:

1. Review Time
2. Turn-around Times, for smears referred to Calgary

METHODOLOGY:

To establish a baseline for comparison, CLS performed a retrospective review of High River peripheral blood smear evaluation time-stamps logged from March to June, 2017, spanning backward to the point of specimen receipt.

During the evaluation, 21 samples were processed using CellaVision DC-1, after which the pre-classifications generated were reviewed by High River Technologists, with support from Calgary-based Pathologists as required.

The time-stamps of receipt and completion for each process step were logged, with particular attention paid to the time-stamps from initial evaluation of the smear in High River to the time-stamp of evaluation in Calgary.

After the smears had been analyzed using CellaVision's digital methodology, the same set of blood smears were analyzed using normal protocols by High River Technologists using manual microscopy following subsequent transportation of smears to Calgary for review by a Pathologist.

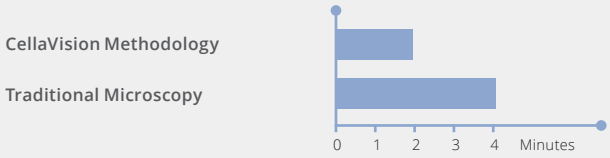
RESULTS:

The results of the evaluation clearly demonstrates that considerable workflow efficiencies can be achieved by implementing CellaVision DC-1 in a distributed laboratory network.

Reduced sample review times, by 50%

The evaluation compared the time required to review a set of blood smears using CellaVision's digital methodology with matched review of the same set of smears using traditional microscopy. CellaVision's digital methodology demonstrated a superior review time relative to traditional microscopy (mean 1.92 ***vs***. 4.05 minutes).

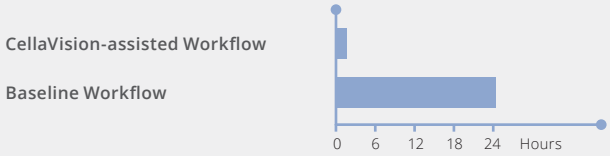
FIGURE 1: COMPARISON OF SAMPLE REVIEW TIME



Improved TATs for smears referred to Calgary, by 94%

The evaluation showed markedly improved turn-around times for smears needing to be referred to the central laboratory in Calgary for review by a Pathologist (CellaVision-assisted workflow median of 1 hour, 22 minutes ***vs.*** baseline workflow median of 24 hours, 06 minutes).

FIGURE 2: COMPARISON OF TATs FOR SMEARS REFERRED TO CALGARY



COMMENTARY:

This in-situ evaluation effectively demonstrates that considerable workflow efficiencies can be achieved by implementing in a CellaVision DC-1 distributed laboratory network.

CellaVision-technology helps Medical Technologists speed-up morphological assessment while enabling collaboration with off-site colleagues, supervisors and pathologists. In a distributed laboratory network, the adaptation of a digital methodology can help realize considerable time-savings by effectively removing the primary cause of prolonged turn-around times – the road-based transportation needed to send challenging slides for review by off-site Pathologists.

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